VOLUME I GETTING STARTED

COMMON ORIGINATION AND DISBURSEMENT 2022-2023 TECHNICAL REFERENCE

DOCUMENT STANDARDS	
TABLE OF CONTENTS	1
HOW TO USE THIS TECHNICAL REFERENCE	2
DOCUMENT STRUCTURE	3
DOCUMENT CONVENTIONS	
VIEWING & PRINTING THE DOCUMENT	
COD SCHOOL RELATIONS	
OVERVIEW OF CHANGES FROM 2021-2022 TO 2022-2023	1
TABLE OF CONTENTSTABLE OF CONTENTS	
COMMON ORIGINATION AND DISBURSEMENT (COD) CHANGES	
ADDITIONS TO COD FOR 2022-2023	
MODIFICATIONS TO COD FOR 2022-2023	3
REMOVALS FROM COD FOR 2022-2023	3
COD OVERVIEW	1
TABLE OF CONTENTS	1
COMMON ORIGINATION AND DISBURSEMENT	2
COD CUSTOMER SERVICE	4
COMMON RECORD OVERVIEW	6
COMMON RECORD PROCESSING	

Document Standards

VOLUME I SECTION

The Common Origination and Disbursement System (COD) Technical Reference includes information for schools using the COD System. School Participants use the XML Common Record to submit Pell Grant, TEACH Grant, and/or Direct Loan data to COD.

The 2022-2023 COD Technical Reference contains message classes, edits, record layouts, implementation guides, and supporting information for COD Users.

Table of Contents

TABLE OF CONTENTS	1
HOW TO USE THIS TECHNICAL REFERENCE	2
DOCUMENT STRUCTURE	2
Volume I: Getting Started	. 2
Volume II: Common Record Technical Reference	. 2
Volume III: Pell Grant, TEACH Grant & Direct Loan Combination System	
Supplement	. 2
Volume IV: Direct Loan Tools	. 3
Volume V: School Testing Guides	. 3
Volume VI: Appendices	. 3
Volume VII: System Generated Responses	
DOCUMENT CONVENTIONS	4
Notes & Updates	
Code Samples	. 4
Calculations	4
/IEWING & PRINTING THE DOCUMENT	
Auto-Rotating	
Printing Double-Sided	
COD SCHOOL RELATIONS	7

How to Use This Technical Reference

The 2022-2023 COD Technical Reference is an operational guide that informs schools, vendors, and third-party servicers how to transmit Pell Grant, TEACH Grant, and Direct Loan Origination and Disbursement data to the COD System.

In particular, this Technical Reference provides the record layout and data elements that are required for the COD System to successfully process submitted records as well as the record layout and data elements for responses that are returned to participants by the COD System.

The information provided in this Technical Reference is not intended to reflect all Federal regulations that govern the Pell Grant, TEACH Grant, and Direct Loan programs and with which all participants must comply. As such, schools, vendors, and third-party servicers must refer to these regulations and documents such as the *Federal Student Aid Handbook*, Electronic Announcements, and Dear Colleague Letters for guidance on regulatory compliance.

Document Structure

The 2022-2023 COD Technical Reference is comprised of six separate volumes that contain key 2022-2023 development information for COD Users. To use the technical reference effectively, choose the appropriate volume for your needs. Each volume has its own table of contents and individual sections.

Volume I: Getting Started

- Volume I Table of Contents
- Section 1: Document Standards
- Section 2: COD Overview of Changes from 2021-2022 to 2022-2023
- Section 3: COD Overview for Users

Volume II: Common Record Technical Reference

- Volume II Table of Contents
- Section 1: Implementation Guide
- Section 2: Message Classes
- Section 3: Common Record Layout
- Section 4: Edit Codes and Descriptions

Volume III: Pell Grant, TEACH Grant & Direct Loan Combination System Supplement

Volume III Table of Contents

- Section 1: Combination System Implementation Guide
- Section 2: Combination System Message Classes
- Section 3: Combination System Record Layouts
- Section 4: Combination System Edit Codes and Descriptions

Volume IV: Direct Loan Tools

- Volume IV Table of Contents
- Section 1: Direct Loan (DL) Tools for Windows, available
- Section 2: DL Tools Message Classes
- Section 3: DL Tools Record Layouts
- Section 4: DL Tools Reports

Volume V: School Testing Guides

- Volume V Table of Contents
- Section 1: COD School Testing Guide
- Section 2: COD Test Cases

Volume VI: Appendices

- Volume VI Table of Contents
- Section 1: Glossary of Terms
- Section 2: Funding Methods
- Section 3: State, Jurisdiction, Country, Codes
- Section 4: System Security
- Section 5: XML Examples
- Section 6: Print Specifications and Forms
- Section 7: COD Reports

Volume VII: System Generated Responses

- Volume VII Table of Contents
- Volume VII, Section 1 COD System Generated XML Response File Instructions
- Volume VII, Section 2 AC Doc Type Example
- Volume VII, Section 2 AC TEACH Exit Counseling Example
- Volume VII, Section 3 AT Doc Type Example
- Volume VII, Section 4 BN Doc Type Example

- Volume VII, Section 6 EC Doc Type Example
- Volume VII, Section 7 ND Doc Type Example
- Volume VII, Section 7 ND Iraq Afghanistan Service Grant Doc Type Example
- Volume VII, Section 8 PN Doc Type Example
- Volume VII, Section 9 PS Doc Type Example
- Volume VII, Section 10 SP Parent PLUS Doc Type Example
- Volume VII, Section 11 SP Grad PLUS Doc Type Example
- Volume VII, Section 12 OF Doc Type Example
- Volume VII, Section 13 CS Doc Type Example
- Volume VII, Section 14 SU Doc Type Example
- Volume VII, Section 15 IB Doc Type Example

Document Conventions

The *COD Technical Reference* update for the 2022-2023 Award Year features many new and exciting changes. The following design conventions have been applied to help distinguish between the information presented within this document.

Notes & Updates

Notes and updates are now placed in the margins, as well as important changes to system functionality.

Code Samples

All code samples, field names, and field values are now distinguished from regular text by their font face, Courier New. Extended snippets of code are presented in the following manner:

Calculations

Calculations have been highlighted and are presented in the following manner:

Eligibility Used Calculation

EU % = 100% × (Sum of Actual Disbursements of Award - DMCS Repayments of Award)

÷ Scheduled Award Amount

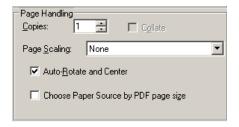
Viewing & Printing the Document

Updates to this document can be found posted on the following website:

• Knowledge Center: <u>2022–2023 COD Technical Reference</u> Knowledge Center

A number of documents in this Technical Reference will contain sections that are oriented differently, utilizing both landscape and portrait orientations to maximize usability. Some printers may not be automatically configured to print both orientations.

The user may have to configure the printer to auto-rotate the pages. This option can be set immediately before sending the document to the printer by selecting the "Auto-Rotate and Center" option:



Printing Double-Sided

This document is best printed in black and white on a printer that is capable of printing double-sided. Double-sided printing will ensure the mirror-margins appear correctly.

Alternatively, if your printer is unable to print double-sided, you can make sure your document is printed properly by following these suggested steps:

- 1. Print all even pages of the document
- 2. Load the even pages into the printer.
- 3. Print all odd pages of the document.

Please note that printing odd pages first, then even pages, may result in the entire document being collated backwards.

It is helpful to determine the paper orientation required to print on both sides properly so that the odd pages are not on the same side as the even pages or upside-down.

COD School Relations

If you have any questions regarding the information contained in this document, please contact the COD School Relations Center at the following phone number:

• COD School Relations Center: 1-800-848-0978

The COD School Relations Center can also be contacted via live chat on COD Web, upon login.

Staff is available Monday through Friday, 8 a.m. -8 p.m. Eastern Time. Or, please email COD Customer Service at CODSupport@ed.gov.

Overview of Changes from 2021-2022 to 2022-2023



2

This section provides an overview of the changes made for 2022-2023 for Common Origination and Disbursement (COD).

Table of Contents

TABLE OF CONTENTS	1
COMMON ORIGINATION AND DISBURSEMENT (COD) CHANGES	
Changes from 2021-2022 to 2022-2023	
Additions to Common Origination and Disbursement	
Modifications to Common Origination and Disbursement	
Removals Common Origination and Disbursement	
ADDITIONS TO COD FOR 2022-2023	
Direct Loan Cost of Attendance	3
Reject Edit 226	3
Reject Edit 227	
Reject Edit 228	
Payment Period End Date (PPED)	4
Incarcerated Student Indicator	4
MODIFICATIONS TO COD FOR 2022-2023	4
Payment Period Start Date (PPSD)	4
Incarcerated Indicator	
Extended Processing	4
Edit 043	
Edit 071	5
Edit 205	6
Edit 994	6
Edit 996	
REMOVALS FROM COD FOR 2022-2023	7
Financial Awareness Counseling	
Edit 225	
Removal of schema versions	_

Common Origination and Disbursement (COD) Changes

Changes from 2021-2022 to 2022-2023

The change descriptions are organized by the following three categories: Additions, Modifications, and Removals. The first column provides a description of each change. The remaining columns indicate which programs the change will affect.

Additions to Common Origination and Disbursement

Description	Pell Grant Program	Direct Loan Program	TEACH Grant Program	Iraq and Afghanistan Service Grant Program
DirectLoanAttendance Cost		Χ		
IncarceratedStudentIndicator	Χ			X
PaymentPeriodEndDate	Χ	Χ	X	X
Reject Edit 226		Χ		
Reject Edit 227	Χ	Χ	X	X
Reject Edit 228	Χ		X	X

Modifications to Common Origination and Disbursement

Description	Pell Grant Program	Direct Loan Program	TEACH Grant Program	Iraq and Afghanistan Service Grant Program
Payment Period Start Date	Χ			X
Incarcerated Indicator	Χ			X
Reject Edit 043	Χ	Χ	X	X
Reject Edit 071	Χ	Χ	X	X
Reject Edit 205		Χ		

Reject Edit 994	Χ	Χ	X	X
Reject Edit 996	Χ	Χ	X	Χ

Removals Common Origination and Disbursement

Additions to COD for 2022-2023

COD Common Record Schema will be enhanced from **4.0e** to **5.0a** to add the new

Description	Pell Grant Program	Direct Loan Program	TEACH Grant Program	Iraq and Afghanistan Service Grant Program
Financial Awareness Counseling		Х		
Reject Edit 225		Χ		

Direct Loan Cost of Attendance (COA) field, a Payment Period End Date field, and a Student Incarcerated Indicator field.

The new fields to be added to the COD Common Record Schema (5.0a) include:

- Direct Loan Cost of Attendance
- Payment Period End Date (PPED)
- Incarcerated Student Indicator

Direct Loan Cost of Attendance

A new award level Direct Loan

Cost of Attendance (<DirectLoanAttendanceCost>) field will be required to establish a new Direct Loan (DL Subsidized, DL Unsubsidized and DL PLUS) award for the 2022-2023 award year and forward. The Direct Loan Cost of Attendance will be optional for maintenance records.

Reject Edit 226

A new award level Edit 226 will be added to reject an origination or maintenance record with Direct Loan Cost of Attendance amount that is less than the Direct Loan award amount. This edit will be applicable to all Direct Loan (DL Subsidized, DL Unsubsidized and DL PLUS) awards for the 2022-2023 award year and forward.

Reject Edit 227

A new disbursement level Edit 227 will be added to reject a new disbursement or disbursement maintenance with Payment Period End Date submitted that is equal to or less than the Payment Period Start Date. This edit will be applicable to all programs Direct Loan (DL Subsidized, DL Unsubsidized and DL PLUS), Pell, IASG and TEACH Disbursements for the 2022-2023 award year and forward.

Reject Edit 228

A new disbursement level Edit 228 will be added to reject a new disbursement or disbursement maintenance for TEACH, Pell, and IASG when the Payment Period Start Date is not contained within valid date range for the associated Award Year.

A new disbursement or disbursement maintenance will be rejected with Edit 228 for TEACH, Pell, and IASG when the Payment Period End Date is not contained within the valid disbursement date range for the associated Award Year.

Payment Period End Date (PPED)

A new disbursement level Payment Period End Date (<PaymentPeriodEndDate>) tag will be required to establish new disbursements for the Pell/IASG, Direct Loan, and TEACH programs for the 2022-2023 award year and forward. The Payment Period End Date will be optional for maintenance records.

Incarcerated Student Indicator

A new disbursementlevel Incarcerated Student Indicator (<IncarceratedStudentIndicator>) will be added as an optional field for Pell/IASG disbursements for the 2022-2023 award year and forward

Modifications to COD for 2022-2023

Payment Period Start Date (PPSD)

Currently, for Pell/IASG and TEACH, the Payment Period Start Date is only required if there was a period of ineligibility at the school. The business rules for the existing disbursement level Payment Period Start date field for Pell/IASG and TEACH programs will be modified to be required for all new disbursements for the 2022-2023 award year and forward. The Payment Period Start Date will continue to be optional for maintenance records.

Incarcerated Indicator

The existing award level Incarcerated Indicator (<IncarceratedIndicator>) tag for Pell/IASG will continued to be processed for 2021-2022 and prior award years, but rejected with edit 996 for 2022-2023 and forward.

Extended Processing

The COD System has been updated to allow schools to submit downward adjustments and non-financial changes to awards and disbursements without the need to request Extended Processing when the award year is past the data submission (closeout) deadline or without the need to reopen an award year if they have confirmed closeout (Balance Confirmation) in an open award year (prior to the data submission deadline). The COD System will continue to require Reopen/Extended Processing for users that wish to create new

actual awards/disbursements, submit upward award/disbursement amount adjustments, or make financial award/disbursement changes.

The Request Extended Processing portion of the Request Reopen/Extended Processing page has been updated to include the following required fields:

- Number of Records
- Dollar Amount of Change(s)
- Required Additional Information

Edit 043

The trigger logic for Edit 043 has been modified to return existing Edit 043, for all award types, when:

-A new award was submitted prior to the beginning of the processing year OR

- A new award or an increase to the award amount is submitted after the school has closed out the program/award year (school or FSA confirmed) and the school has not been reopened
- OR
- -A new award or an increase to the award amount is submitted after the data submission (closeout) deadline for the program/award year, and the school has not been granted Extended Processing.

The COD System will NOT return Edit 043 when:

- A decrease or non-financial change* to the award is submitted after the school has closed out the program/award year (school or FSA confirmed) and the school has not been reopened
- OF
- -A decrease or non-financial change* to the award is submitted after the data submission (closeout) deadline for the program/award year, and the school has not been granted Extended Processing

*Non-financial changes are defined as any award-level maintenance except changes to Award Amount.

Examples of non-financial changes: CPS Transaction Number, Award Start and End Dates, Verification Status, etc.

Edit 071

The trigger logic for Edit 071 has been modified to return existing Edit 071, for all award types, when:

- DL, TEACH,
- -A new disbursement (DRI = "True") is submitted prior to the beginning of the processing year

- OR
- -A new disbursement or disbursement increase is submitted after the school has closed out the program/award year (school or FSA confirmed) and the school has not been reopened
- OF
- -A new disbursement or disbursement increase is submitted after the data submission (closeout) deadline for the program/award year, and the school has not been granted Extended Processing.
 - The COD System will NOT return Edit 071 when:

•

- A decrease or non-financial* change to the disbursement is submitted after the school has closed out the program/award year (school or FSA confirmed) and the school has not been reopened
- OR
- -A decrease or non-financial* change to the disbursement is submitted after the data submission (closeout) deadline for the program/award year, and the school has not been granted Extended Processing
- OR
- · For a Pell Grant, when the student is in POP status

*Non-financial changes are defined as any disbursement-level maintenance except new disbursements (DRI="True") or changes to Disbursement Amounts. Examples of non-financial changes: Coronavirus Indicator, Disbursement Date, School Enrollment Code, Enrollment Status, etc.

NOTE: Reopen/extended processing for Iraq and Afghanistan Service Grant must be requested under the Pell program. If authorized, reopen/extended processing will apply to both programs for that award year. This is applicable for IASG 2017-18 and forward.

Edit 205

The existing Edit 205 will be modified to reject Payment Period End date that is not contained within the Award Begin and End Dates for Direct Loan program.

Edit 994

The existing Edit 994 will be modified for award year 2022-2023 and forward to reject for:

- Missing value for <DirectLoanAttendanceCost> on a Direct Loan origination.
- Missing value for <PaymentPeriodStartDate> on new disbursements for Pell/IASG and TEACH programs.
- Missing value for <PaymentPeriodEndDate> on new disbursements for Pell/IASG, Direct Loan and TEACH programs.

Edit 996

The existing Edit 996 will be modified for award year 2022-2023 and forward to reject for:

- Invalid value for <DirectLoanAttendanceCost> on a Direct Loan Award origination.
- <IncarceratedIndicator> tag at award level submitted on a Pell Award (Origination/Maintenance).
- Invalid value for <PaymentPeriodStartDate> on new disbursements for Pell/IASG and TEACH programs.
- Invalid value for <PaymentPeriodEndDate> on new disbursements for Pell/IASG, Direct Loan and TEACH programs

Removals from COD for 2022-2023

Financial Awareness Counseling

The COD System will retire Financial Awareness Counseling and the system generated response will not include any records for Financial Awareness Counseling.

Edit 225

Rejecting Edit 225 that would trigger to reject an actual disbursement submitted with no Informed Borrowing completed on file will not be applicable for 2022-2023.

Removal of schema versions

The COD System will retire COD Common Record Schema 3.0d and 3.0e. If the Common Record is submitted with retired schema versions 3.0d or 3.0e, the COD System will reject the batch with Rejecting Edit 210.

COD Overview

The Common Origination and Disbursement (COD) System was implemented in April 2002 by the Office of Federal Student Aid (FSA) to re-engineer the process of delivering and reporting Federal Pell Grants and Direct Loans from two processes into one Common Origination and Disbursement Process. This section will provide an overview of the COD System, contact information for COD Customer Service, and high-level information regarding the common record files and how they are processed through COD.

Table of Contents

TABLE OF CONTENTS	1
COMMON ORIGINATION AND DISBURSEMENT	2
COD Users	3
COD Web Site Cookies	
COD CUSTOMER SERVICE	4
COMMON RECORD OVERVIEW	6
What is XML?	6
XML 101	7
Fixed-Format Files vs. XML Documents	7
Common Record Structure	8
XML Schema	10
XML Resources	10
COMMON RECORD PROCESSING	11
Common Record Submission	11
Batch Submission	11
Online Submission	11
Common Record Receipt	11
Common Record Processing	12
New Record	12
Update/Maintenance Record	13
Common Record Editing	
Response Documents	14

Common Origination and Disbursement

The Common Origination and Disbursement (COD) System was implemented in April 2002 by the Office of Federal Student Aid (FSA) to re-engineer the process of delivering and reporting Federal Pell Grants and Direct Loans from two processes into one Common Origination and Disbursement Process.

On July 1, 2006, the COD System implemented the Higher Education Reconciliation Act of 2005 (the HERA). The HERA introduced the Academic Competitiveness Grant (ACG), the National Science and Mathematics Access to Retain Talent (SMART) Grant, and the PLUS loan for graduate and professional student borrowers (Grad PLUS). The COD System processes Grad PLUS for the 2005-2006 award year and forward and processed the two Grant programs for the 2006-2007 through the 2010 -2011 award years.

On September 27, 2007, Congress enacted the College Cost Reduction and Access Act (CCRAA). As a result, the Teacher Education Assistance for College and Higher Education(TEACH)Grant Program was established effective beginning with the 2008-2009 Award Year. On July 1, 2008, the COD System began processing TEACH Grant awards for the 2008-2009 Award Year and forward.

In March 2016, the COD System stopped processing ACG and the SMART Grant awards.

COD provides a common process and an integrated system that enables efficient delivery of Title IV Funds. COD allows for:

- Common Processing:
 - One process and record for submitting origination and disbursement data
 - Edits that are common across the Pell Grant, TEACH Grant, and Direct Loan programs
 - Data tags that are common across the Pell Grant, TEACH Grant, and Direct Loan programs, and are (approaching) a cross-industry standard for data definitions
 - Elimination of duplicate data reporting for Pell Grants, TEACH Grant, and Direct Loans
- Streamlined edits to reduce turnaround time for exception processing
- Expanded online capability to make corrections/changes, to process "emergency" requests, and to check transmission status

In general, the COD Process is a simplified process for requesting, reporting, and reconciling Title IV funds.

COD Users

A COD User utilizes the Common Record in XML format to submit Pell Grant, TEACH Grant, and/or Direct Loan origination and disbursement data to the COD System.

COD Participants may submit data to the COD system in two ways:

- Batch processing of Common Record documents over the Student Aid Internet Gateway (SAIG).
- Manual entry of Common Record data using the COD web site.

Users should refer to 2022-2023 COD Technical Reference, Volume II - Common Record Technical Reference for record layouts and processes.

COD Web Site Cookies

The COD Web site uses a "cookie" to help visitors use the web site interactively. A cookie is a small file that a web site transfers to the user's computer hard disk, usually for the purpose of tracking the user while he or she is connected to that site.

The cookie on this site does not collect any information about the user, only about the user's browser session. The cookie makes it easier for users to use the dynamic features on these web pages, without having to provide the same information repeatedly as the user moves from one page to another, essentially confirming that a valid log-in was performed each time the user moves to another page. If a user has his or her computer set to block all cookies, the cookie is not created at log-in. As a result, the COD Web site cannot validate when the user moves from one web page to another. If the COD Web site cannot validate the user, the user's session is terminated, and the user is forced to log in again. To avoid this situation, all users must set their Internet browser Privacy settings for cookies to "high" or less.

COD Web site & Privacy

For more information about COD Web privacy, please go to: https://cod.ed.gov/cod/Privacy

COD Customer Service

The COD School Relations Center integrates customer service for the Direct Loan, TEACH Grant, and Pell Grant Programs.

All schools should use the following number or email address listed below for assistance:

- COD School Relations Center:
 - 0 1-800-848-0978
 - o <u>CODSupport@ed.gov</u>
- The COD School Relations Center can also be contacted via live chat on COD Web, upon login.
- Transmit all batch files to the SAIG mailbox to be forwarded to COD to be processed
- Perform on-line Parent PLUS and Grad PLUS Credit Checks on the COD Web site at: https://cod.ed.gov
 - The COD System does not print or mail paper MPNs to borrowers or schools. Borrowers may still complete a paper MPN by downloading the form from StudentAid.gov and mailing the completed form to Federal Student Aid.
- Mail Promissory Notes to:

US Department of Education P.O. Box 9002 Niagara Falls, NY 14302

Overnight Mail:

U.S. Department of Education 2429 Military Road Suite 200 Niagara Falls, NY 14304 Refunds of Cash for Direct Loans should be returned using the Electronic Refund function in G5. The Electronic Refund function can be accessed from the G5 "Main Menu."

Refund Checks

Effective January 1, 2015 the COD System stopped accepting refund checks.

- Refunds of Cash for Pell Grants should be returned using the Electronic Refund function in G5. The Electronic Refund function can be accessed from the G5 "Main Menu."
- Schools choosing to create Master Promissory Note (MPN) forms instead of using Department provided forms must submit them for testing and review only to:

US Department of Education P.O. Box 9002 Niagara Falls, NY 14302

Overnight Mail:

U.S. Department of Education 2429 Military Road Suite 200 Niagara Falls, NY 14304

Submitting MPNs for Test and Review

All documents and shipping packages should be clearly marked "For Testing Only".

Common Record Overview

The Common Origination and Disbursement process utilizes one single record across programs for both origination and disbursement. Participants use a Common Record, one that uses common data elements, definitions, edits, and structure for Pell Grants, TEACH Grants, and Direct Loans. Although the record has the same layout for all programs, not all data elements are required for each transmission. This record layout relies on a technology called the eXtensible Markup Language, or XML.

The Common Record was developed in partnership with members of the National Council of Higher Education Loan Programs (NCHELP) and the Postsecondary Electronic Standards Council (PESC). This collaborative effort enables the Common Record to bring consistency and standardization to the transmission of student financial aid data.

What is XML?

XML stands for eXtensible Markup Language. XML is a recommendation by the World Wide Web Consortium (W3C) for how to represent structured information in a text-based format. XML is a markup language whose roots originate in HTML and SGML. Like HTML, XML consists of elements that are defined by tags. A start tag containing a name precedes element data; an end tag follows it. While HTML tags have a specific meaning and generally describe how the text between them should look, XML uses tags only to delimit pieces of data and leaves the interpretation of the data completely to the application. The tags identify data elements and provide metadata, or meaning, for the information that appears between the tags.

The textual and self-describing nature of XML makes its platform independent and very flexible in terms of content. It is an open standard for storing, publishing, and exchanging any kind of information between any number of disparate systems. As long as two parties agree on and adhere to a common data structure, they can transfer information to each other without any knowledge of the other party's operating system, database type or programming language. XML can be used in conjunction with HTML to store data within standard web pages. It can also be used to store data in files and to pull information from disparate, incompatible databases.

One of the objectives behind the design of the COD Process and System was to provide FSA and our partnering student aid schools greater flexibility in record processing, i.e., opportunities for multiple data crosswalks. The COD Process could serve as a technological foundation for future FSA integration initiatives. Given these objectives, XML was the logical choice for the Common Record's format and structure. XML offers the flexibility to design records, known as XML documents, particular to an audience or community. It allows increased access to and reuse of information. It supports validation [edits] by checking structural validity and flagging errors. It also enables systems to share information and users to see different views of available data.

XML 101

XML technology allows a common data packet structure to be used between two disparate systems. It is a markup language that defines data structure. An XML document is the vehicle through which data is transmitted. It can be thought of as a batch.

XML documents are comprised of markup and content. Markup defines the content. For example, LastName is the markup describing the content, Jones.

```
<LastName>Jones
```

<LastName> is a start tag. Note the presence of brackets. LastName is an
element. Jones is the data, or XML content. <pre

Elements can be either complex or simple. A complex element is a grouping of attributes or other elements. The Common Record is a logical grouping of complex elements. In the following example, the Complex Element is bolded.

Complex Element:

```
<Name>
     <FirstName>Heidi</FirstName>
     <LastName>Smith</LastName>
</Name>
```

A simple element refers to the value that is contained within tags. In the following example, the two simple elements are bolded.

Simple Element:

```
<Name>
    <FirstName>Heidi</FirstName>
     <LastName>Smith</LastName>
</Name>
```

Fixed-Format Files vs. XML Documents

Fixed-format files have been used as vehicles through which data can be exported and imported to business applications. Fixed-format files contain a sequence of fields that is in machine-readable language. An example of a comma-separated, fixed-format file follows:

```
Sally, A, Smith, 299999999, 1980-02-03, IN, DL222222, false, P, 417 Halper Road, Fort Wayne, IN, 46807, Allen, USA, 2197999999, sally.a.smith@email.net, 1, 221784902
```

In the above comma-separated fixed-format file, it is difficult to understand what the data means. There is also no way to validate the document to make sure that the data is represented in a format that can be read by the receiving application.

XML is a language that is not only machine readable, but also human readable. It also has a mechanism to ensure the validity of the document format through the use of XML schemas. As a result, business applications are rapidly moving toward the use of XML to exchange data. The following example demonstrates that XML not only represents data in a human readable text format, but also provides meaning to the

data through the use of tags. This is how a Student record similar to the one represented in the fixed-format file above would be represented in XML:

```
<Student>
   <Index>
      <SSN>299999999</SSN>
      <BirthDate>1980-02-03</BirthDate>
      <LastName>Smith</LastName>
   </Index>
   <Contacts>
      <PermanentAddress>
          <AddressLine>417 Hapler Road</AddressLine>
          <City> Fort Wayne </City>
          <StateProvinceCode>IN</StateProvinceCode>
          <PostalCode>46807</PostalCode>
      </PermanentAddress>
      <Phone>
          <PhoneNumber>219-799-9999</PhoneNumber>
      </Phone>
      <Email>
          <EmailAddress>sally.a.smith@email.net</EmailAddress>
      </Email>
   </Contacts>
   <Citizenship>
      <CitizenshipStatusCode>1</CitizenshipStatusCode>
   </Citizenship>
      <SchoolNoteMessage>New Person</SchoolNoteMessage>
   </Note>
</Student>
```

Common Record Structure

The XML document called the Common Record is composed of different information modules, referred to as complex elements or blocks. Data fields within the blocks emphasize similarities across programs and contain information such as: document or batch information, school or entity information, person information, award or origination information, disbursement information, and the response status of the record.

A general rule regarding sequence of data within blocks, and within complex elements: the start and end data tags and their content must be presented on the XML document within the block's tags or the complex element tags to which they belong. The sequence of the data within that block or element is dictated by the sequence of the data tags presented in the XML Common Record Schema. For example, if a complex element has ten simple elements within it, those ten elements must occur in the same sequence as depicted in the XML Common Record Schema.

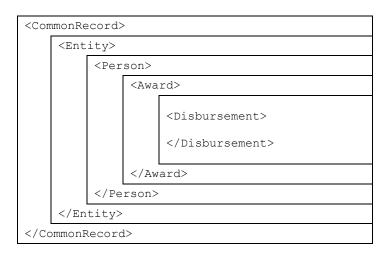
The Common Record is organized into the following structure:

Quick Reference Block Description

	Block Name	Block Description
1	Document Information	The Document Information Block contains information that was previously associated with a batch. It contains a date/time stamp, document validation information, summary-level document information, as well as the source of the document. This block occurs once per XML Document or submission.
2	Entity Information	The Entity Information Block contains information about the reporting and attending school. This block occurs once per reporting entity or school within the XML Document or submission.
3	Person Information	The Person Block contains student or parent information. This block occurs once per person, except for Grad PLUS where there will be two person blocks with identical data. All data within the two blocks must be identical.
4	Award Information	The Award Information Block contains Direct Loan, Pell Grant, and TEACH Grant award information, similar to origination data submitted in the fixed-length record layouts. As other partners use the Common Record to transport data, this will be the location of those awards. This block occurs once per award per person.
5	Disbursement Information	The Disbursement Information Block contains Direct Loan, Pell Grant, and TEACH Grant disbursement information. This block occurs once per disbursement.
6	Response	A Response block is nested within each block. The Response block is returned by COD to the submitting entity upon processing the Common Record. The Response block contains information about processing edits and document status.

Below is a pictorial representation of the Common Record layout. It illustrates how the Common Record is comprised of information modules or blocks.

The Common Record Document Structure



These information modules or blocks may be reused many times in the same record to transmit data for multiple awards and multiple disbursements for one or multiple students by one or multiple Attended Schools.

Schema Version

In spring 2022, all records containing 2022-2023 (and forward) data should be submitted in the 5.0a schema.

Schools may continue to send records for prior Award Years in earlier schema versions (4.0a, 4.0b, 4.0c, 4.0d, and 4.0e only)

XML Schema

An XML Schema specifies the rules surrounding the logical structure of an XML document. It is a language that describes the allowed content of documents. It defines the elements present in the document and the order in which they appear, as well as any attributes that may be associated with an element.

To support the open standards proven effective in the development of the Common Record, FSA is making the XML Schema for the Common Record available electronically to all interested parties. Whether a school, a software provider, or a third-party servicer is using it for product development to support COD or any student financial resource trading partner is interested in incorporating the Common Record into their products and services, the schema is available on the web at: http://ifap.ed.gov/ifap/publications.jsp.

XML Resources

Extensible Markup Language (XML) is a growing standard for e-commerce, data transmissions and structured documents using the Internet. Many industry groups are developing schemas and data dictionaries for this purpose. As a result, there is extensive information available about XML and the initiatives specific to the higher education community. Many institutions are already using XML for their own Internet initiatives, including self-service applications for students, faculty, and staff; data exchanges both within and outside the school, and even data coordination or backup with data warehouse projects.

Available resources about XML include courses at many institutions and local or Internet bookstores. The Web is also a resource, including the sites mentioned below. The first three are international standards bodies, and the last is specifically for the schema and data dictionary for higher education.

- http://www.w3.org
- http://www.ebXML.org
- http://www.oasis-open.org
- http://www.PESC.org
- Sun's XML & Java Technologies: http://java.sun.com/xml
- The XML Industry Portal: http://www.xml.org
- O'Reilly XML.com: http://www.xml.com
- The XML FAQ: http://www.ucc.ie/xml

Literature is constantly being updated as new technologies develop and mature. Therefore, it is recommended that time be spent exploring these resources.

Common Record Processing

This section addresses at a high level the processing of the Common Record from the institution perspective.

The COD Process is comprised of the following steps:



Please note that this overview of the COD Process will not cover the entire cycle for a school. There are items that take place prior to the submission of records (i.e. packaging) that are not explained in this document.

Common Record Submission

The COD Process begins when a school submits a Common Record. The Common Record is submitted by schools in one of two ways:

- Batch Submission via SAIG
- Manual Online Submission via the COD web site

Batch Submission

All Common Records sent in batch mode are submitted to COD's Student Aid Internet Gateway (SAIG) mailbox. The Enterprise Application Integration Bus (EAI Bus) performs periodic sweeps of COD's SAIG mailbox and transmits the Common Record data to the COD System.

Online Submission

A COD User can manually enter data online via the COD web site. The COD Web site creates a Common Record document for data entered online and sends it directly to the COD System.

Common Record Receipt

In March 2016, the COD system stopped generating and sending receipts for Common Record documents received via SAIG.

Common Record Processing

Upon receiving a record, the COD System classifies the record to determine how it is to be processed. The types of records are:

- New Record
- Update/Maintenance Record

New Record

A New Record establishes a new person, award or disbursement on the COD System. There are three types of new records:

- New Person with New Award If the SSN contained in the student identifier does not match any previously submitted to the COD System, then the record is considered a New Student. Any New Student Record must contain a New Award Record. For Pell Grant, TEACH Grant, and Direct Loan Subsidized/Unsubsidized, the Student Identifier submitted by a school to establish the student on COD is matched to data from the Central Processing System (CPS).
 - For Pell Grant and TEACH Grant, the current SSN, current Date of Birth, and first two characters of the current Last Name are matched with CPS data.
 - For Direct Loans, the current SSN and current Date of Birth are matched with CPS data.
- New Award If the student identifier matches an SSN already established on the COD System, then the system checks to determine if the award is already on file. If not, then the record is considered a New Award.
- New Disbursement If the person and award already exist on the COD System, then the system checks the disbursement number submitted for the award. If it is not already on file, then the system logs the disbursement as a new disbursement. There are two types of disbursement records:
 - Actual Disbursement Actual Disbursement Records contain a DisbursementReleaseIndicator equal to true. The DisbursementReleaseIndicator is a tag on the Common Record that signals to the COD System that the disbursement information is an actual disbursement. It either makes funds available to a school, or substantiates cash already made available to the school. These records affect the Current Funding Level (CFL) calculation for the school. This can be thought of as the actual disbursement record in the old fixed-length record process.
 - O Anticipated Disbursement Anticipated Disbursement Records contain a DisbursementReleaseIndicator equal to false or omitted. If the DisbursementReleaseIndicator is omitted, the

Award Already on File

For Direct Loans and TEACH Grant, the Financial Award Type, Financial Award Year, Attended Entity ID, Reporting Entity ID, and Financial Award ID fields are checked to determine if the award is already on file. indicator will default to false. These disbursements are not considered Actual Disbursements; therefore, they do not substantiate drawdowns. These records do not affect the CFL calculation for the school.

Update/Maintenance Record

An Update/Maintenance Record performs a change to information or elements that were previously established on the COD System by a New Record. There are two types of Update/Maintenance Records:

- Update/Maintenance Record An Update/Maintenance Record performs a change to a data element that was previously established by a New Record or is used to change disbursement amounts and dates that occur prior to substantiating drawdowns.
- Release Record A Release Record can be submitted to the COD System with a DisbursementReleaseIndicator equal to true for a disbursement record previously submitted as an Anticipated Disbursement Record. Data elements can be changed via the COD Web site or by resubmission of a Common Record. Once the release indicator is set to true, there will no longer be an anticipated disbursement on the system with the same disbursement number as the actual.

Common Record Editing

Once the Common Record is received and has been classified, the COD System performs a series of valid format and content edits to determine if the file is suitable for further processing.

The COD System performs three types of edits:

- Correction For Pell Grant data, if the school selects this option, the system automatically corrects the data and sends a response to the entity that submitted the record indicating that a correction took place, the element corrected, the original value, and the corrected value. The default option in the COD System for all schools is set to 'correct'. If a school wants to have COD reject data instead of correcting it, then it must contact the COD School Relations Center to request that FSA make this change.
- Warning The COD System sends a response to the entity that submitted the record indicating a warning, the warning code and the relevant element. The record continues to be processed by the COD System.
- Reject The COD System sends a response to the entity that submitted the record indicating the reject code, the reject reason(s) and the relevant element(s). The record requires action from the school to continue processing.

Where possible, COD uses information from CPS as a basis for these edits. COD receives the information from CPS on a daily basis. This file is used to:

• Confirm a valid ISIR is on file (if applicable) and,

The Common Record can be resubmitted in its entirety or sent with just the key identifiers, minimum data elements required for processing, and those data elements that have changed.

Record Layouts and Processes

For further information regarding record layouts and processes, schools/software vendors should refer to *Volume II – Common Record Technical Reference*.

For examples of COD Response Documents, please refer to *Volume VI, Section 6 – XML Examples* and *Volume VII, Section 7 – COD System Generated XML Response Files.*

If you use a combination of EDExpress and another system, please refer to *Volume III – Pell Grant& Direct Loan Combination System Supplement* for record layouts, processes, and edits pertinent to working in a combination system.

• Pull student-level information required for Common Record processing.

The COD System performs edits on the Document, Entity, Person, Award and Disbursement levels of the Common Record data. Data that passes edits is accepted and continues to be processed while data that does not pass edits is rejected. The COD System stores rejected data and associated reject reasons. Rejected data is held for corrective action to be taken by the school. Data can be corrected via Common Record resubmission or via the COD web site. The COD System then returns a response record notifying the school of the edit results.

Response Documents

For all Common Records received and processed by the COD System, the COD System returns a Response document indicating the status of the Common Record processing, including any rejected data elements and the reason for the rejection. If the Common Record was accepted, then the Response document indicates that the record was accepted.

The COD System sends one Response document for each Common Record document submitted. For Common Records that are transmitted via the SAIG, the COD System sends Response documents to the school's SAIG mailbox. For Common Record data entered into the COD web site, schools have an option to receive a Response document via their SAIG mailbox in addition to seeing the response via the COD Web site.

For Responses received via the SAIG mailbox, schools also have the option to receive a Full or a Standard Response to Common Records processed by the COD System. A Full Response contains all the original tags sent by the school and the rejected data elements and reason codes. A Standard Response contains only the minimum tags, the rejected data elements and reason codes.